Stryker Trophy System Destroys RPGs at First U.S. Live-Fire Tests

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DAHLGREN, Va. (NNS) -- The Trophy Active Protection System (APS) designed to protect vehicles from rocket or missile attacks was successfully demonstrated for the first time on U.S. soil at the Naval Surface Warfare Center (NSWC) Dahlgren Division March 30.

More than 100 visitors, including U.S. and international military dignitaries, observed the testing that culminated with a live-fire demonstration of the Trophy APS-equipped Stryker combat vehicle that was on the move when it detected, tracked and defeated an inert incoming rocket propelled grenade.

"The Department of Defense now has at its disposal, technology that allows U.S. forces to defeat both the archer and the arrow," said Marine Corps Col. Wade Hall, transformation strategist at Office of Force Transformation (OFT). "This active protection system can be taken to the battlefield."

Integrated on heavy, medium and light platforms, Trophy APS is currently ready for deployment against all types of high explosive anti-tank (HEAT) threats, including all known types of anti-tank guided missiles, anti-tank rockets and tank HEAT rounds. The Trophy APS Hard Kill system operates in three major stages: threat detection, threat tracking followed by Hard Kill mechanism activation, and threat neutralization by a countermeasure. The neutralization process takes place only if the threat is about to hit the platform.

The testing at NSWC Dahlgren, held in support of the OFT Full-Spectrum Effects Platform (FSEP) program - also known as Project Sheriff - was conducted on the heels of similar Israeli experiments in late February. FSEP program officials seek to meet urgent operational requirements for a range of lethal and non-lethal technologies integrated on a rapidly deployable platform. Trophy was selected in 2005 to be Project Sheriff's active protection solution.

"Sheriff is the nickname, but FSEP better explains this full-spectrum effects capability that is not platform specific and can be integrated on ships as well as vehicles," said Hall. "The Navy is looking at this application for ships that have a mission in the littoral combat threat areas. The great thing about (Naval Surface Warfare Center) Dahlgren is its flexibility and capability to work with other services and agencies to apply FSEP to other platforms."

Held at the request of the Secretary of Defense's OFT, the tests certified comprehensive experiments conducted by the Israeli Defense Forces, validating Trophy's ability to detect, track and destroy incoming rocket propelled grenades at safe distances from the host vehicle.

"The partnership of our engineers with warfighters, industry and DoD systems experts to test Trophy APS integrated on Project Sheriff vehicles will make a difference in our military's ability to fight, win and come home safely," said NSWC Dahlgren Division Commander, Capt. Joseph McGettigan. "This active protection system, in addition to Project Sheriff's lethal and non-lethal technologies, will bring a set of capabilities to the warfighter that he's never had before all in one spot."

A rapid response to several urgent needs of combatant commanders, Project Sheriff is an operational prototype that integrates, for the first time, a broad range of lethal and non-lethal capabilities into an armored Stryker vehicle.

"The synergy of systems is greater than the sum of the parts and is what Sheriff is all about," said Hall.

The objective is to provide tactical commanders with more options to deal with the chaos of urban combat. OFT, in partnership with the U.S. Army's Futures Center, is seeking to develop an operational package of vehicles that can be quickly outfitted and deployed in active operations, allowing combat forces the opportunity to flesh out the tactics, techniques and procedures for how to best employ this new range of capabilities.

OFT advocates and seeks to catalyze experiments that get nascent capabilities into the hands of warfighters to create new knowledge and learning. The FSEP will integrate new weapons and sensor technologies onto current platforms in a spiral development approach, and will ultimately field increasingly advanced capabilities. U.S. test certification concludes the Trophy FSEP's Spiral 0 efforts. Spiral 1 includes developing an autoloader for the Trophy active protection system.

Sheriff engagement options include an Office of Naval Research and NSWC Dahlgren-developed counter fire system called Gunslinger that uses acoustic and infrared sensors to identify the location of hostile small arms fire and cues a gun mount to quickly locate the shooter and to return fire.

The suites of weapons for Project Sheriff, developed in diverse industry, military and government labs, have been demonstrated and tested in a realistic environment as individual components, said FSEP Program Director Bob Dibble, who is managing the project's integration.

"The technologies are ready," he stressed. "We're doing the integration at Dahlgren and are working with multiple labs from all the services."

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